

Biodiversity Conservation Planning in Florida

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Florida Fish and Wildlife Conservation Commission



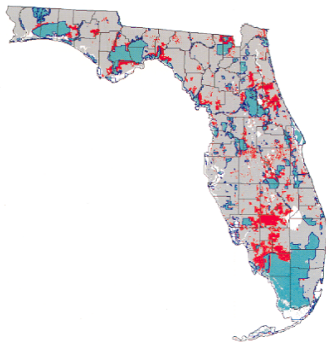


Closing the Gaps

“To identify lands in Florida that, at a minimum, must be conserved and managed in order to ensure the long-term survival of key components of Florida’s biological diversity.”

CLOSING THE GAPS IN FLORIDA'S WILDLIFE HABITAT CONSERVATION SYSTEM

*Recommendations to meet minimum conservation goals for
declining wildlife species and rare plant and animal communities.*



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620 South Meridian Street
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1994

- Assess degree of security
- Identify important habitat not currently protected
- Provide guidance to:
 - Public land acquisition
 - Land use planning
 - Development regulation
 - Land conservation efforts





Closing the Gaps

- **Question:** “How many focal species have 10 populations of 200 breeding adults on the current system of public lands?”
- **Technique:** Overlay public land boundaries on focal species maps and estimate population sizes.





Species Selection Criteria

- Habitat mapping capability
 - Estimated using GIS
- Available occurrence and life history information
- Large home range size and/or
- Links to specific rare plant communities





44 Focal Species



Black bear



Florida panther

Wide-ranging species



Wood stork



Beach mice

Listed species



Crested caracara



Florida scrub jay

Community indicators



Snail kite



Gopher tortoise

Keystone species





Strategic Habitat Conservation Areas

- **Answer:** 30 of the 44 focal species were not adequately protected on public lands.
 - 30 focal species
 - 4 rare plant communities
 - Bat caves
 - Wading bird wetlands
 - Globally rare plants





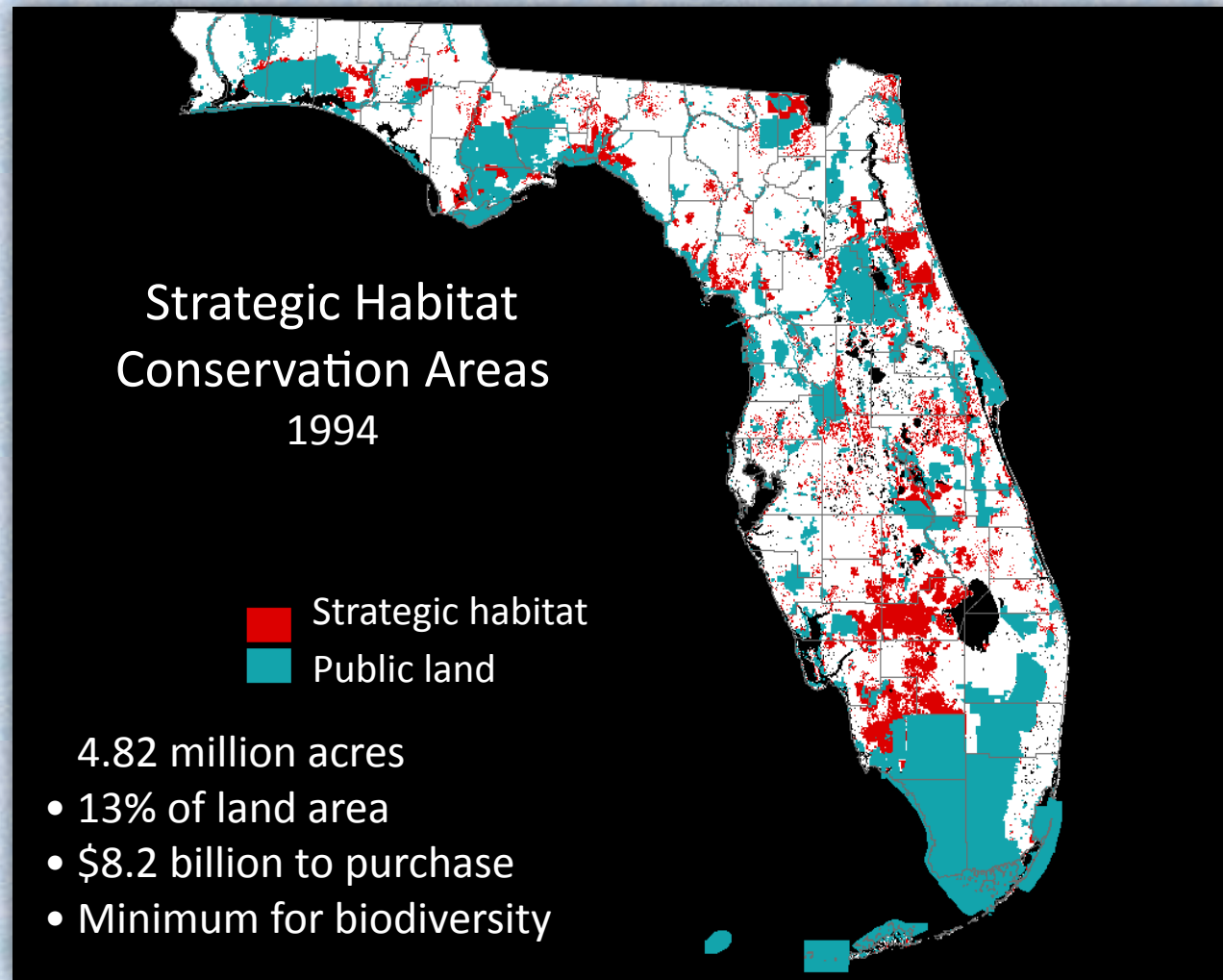
Identification of Strategic Habitat Conservation Areas

- Identify lands with the best chances of significantly increasing long-term survival
- Locate enough habitat to support 10 populations of 200 individuals
- Private lands
- Set of selection criteria





Strategic Habitat Conservation Areas





HABITAT CONSERVATION NEEDS OF RARE AND IMPERILED WILDLIFE IN FLORIDA



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2000





Testing the Effectiveness of selected focal species

- All listed vertebrates
 - Not in the 1994 report
 - Except fishes, sea turtles and marine mammals
- Imperiled species
 - Literature and expert opinion
- Protection status
 - Public land
 - Strategic Habitat Conservation Areas





Habitat Conservation Needs Report Assessment

- 124 species of wildlife
- Habitat models
 - 76 species
- Model accuracy
 - Expert opinion
- Population evaluation
 - 28 species
 - Occurrence records





Habitat Needs Report - Results

- 17 species not secure
- No new strategic habitat
 - Small, restricted ranges

Seal salamander

Georgia blind salamander

Four-toed salamander

Keys mud turtle

Florida Keys mole skink

Cedar Key mole skink

Rimrock crowned snake

Louisiana waterthrush

Cooper's hawk

Black skimmer

Painted bunting

Lower keys marsh rabbit

Southeastern bat

Silver rice rat

Sanibel Island rice rat

Salt marsh vole

Key deer





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FISH AND WILDLIFE RESEARCH INSTITUTE TECHNICAL REPORTS

Wildlife Habitat Conservation Needs in Florida Updated Recommendations for Strategic Habitat Conservation Areas

Mark Endries, Beth Stys, Gary Mohr, Georgia Kratimenos,
Susan Langley, Karen Root, Randy Kautz



Florida Fish and Wildlife
Conservation Commission

FWRI Technical Report TR-15



2009





Why Update?

- Land use/Land cover changes
 - Conversion to Agriculture/Developed
 - Fragmentation
- Data
 - Species location
 - Land cover
 - Life history
- Technology
 - Hardware
 - Software
- ❖ Secure, Lost, Refocus





Species Selection

- SHCA species (1994) (38 species)
- Species not secure (2000) (15 of the 17 identified)
- Species with declining populations and threatened habitats or possible change in listing status (9 species)
- 62 species selected
 - 14 amphibians and reptiles
 - 32 birds
 - 8 species of wading birds – as a group
 - 16 mammals





Results

- 34 species not secure
 - 7 amphibians and reptiles
 - 13 birds
 - 14 mammals
- 21 species
 - SHCA in 1994 AND 2009
- 8 species no longer need SHCA
 - SHCA in 1994 and 2009
- 5 species new in 2009





Additional Uses of Information

- Unoccupied/Low Density Areas
 - Restoration
 - Restocking
- Identification of Data/Knowledge Gaps
- Performance Measure
 - Species no longer requiring SHCA
 - Use with caution





Lessons Learned

- Species Selection
 - Not all fit
 - Habitat limited species
- Expect unexpected results
- Interpretation of Maps
 - Disclaimers
 - Regulatory implications
- Misuse of data/information





Lessons Learned

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Guidance on Use

- Comparison with 1994 report
- Assumptions
- Sources of Error
 - Base data layers
 - Positional accuracy
 - Temporal accuracy
 - Species-specific bias
 - Habitat quality
 - Population density
 - Availability of data
 - Error propagation
- Appropriate uses
- Inappropriate uses





Inappropriate Uses

- Issues dealing with:
 - Scale
 - Area Measurements
 - Exact boundaries
 - Presence/Absence
 - Condition/health determination
 - Comparative accuracy



Thank you.

?? Questions ??

To request reports and data: gisrequests@myfwc.com

